

Abstract

Transceiver

A transceiver having an RF receiver, in particular VHF receiver, with digital signal processing in a digital part (DIT), with an input part, at least one mixer and an intermediate frequency/baseband processing means (BBV), having a local channel oscillator (EVO), to which a first phase locked loop with a phase discriminator (PD1) and an adjustable first frequency converter are assigned, and having a reference oscillator (REO) for the phase locked loop and the control clock (f_{st}) of the digital signal processing means, in which, in order to acquire the control clock (f_{ste}), a digital clock synthesizer (DDS) is provided to which an output signal (S_{REF}) of the reference oscillator (REO) is supplied, and a control signal (S_{AFC}) is supplied by the digital part (DIT) in the form of a digital tuning word, the frequency (f_{REO}) of the reference oscillator (REO) being selected such that its order of magnitude is at least equal to the bandwidth of one or more of the reception bands used, and none of its harmonics occur in a reception channel.

Fig. 1

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(54) Title: TRANSMITTER-RECEIVER

(54) Bezeichnung: SENDEEMPFÄNGER

(57) Abstract

The invention relates to a transmitter-receiver with an HF receiver, especially a UHF receiver, comprising a digital signal unit in a digital part (DIT), an input part, at least one mixer and an intermediate frequency/base band processing unit (BBV), a local channel oscillator (EVO), to which a first phase control circuit with a phase discriminator (PD1) and an adjustable first frequency transformer is assigned, and a reference oscillator (REO) for the phase control circuit and the control pulse clock (fST) of the digital signal processing unit, wherein a digital clock pulse synthesizer (DDS) is provided for obtaining the control clock pulse (fSTE), to which an output signal (SREF) of the reference oscillator (REO) and a control signal (sAFC) from the digital part (DIT) is fed in the form of a digital tuning word, wherein the frequency (fREO) of the reference oscillator (REO) is selected in such a way that its magnitude is at least the same as the size of the band width of one or several receiving bands used and none of their harmonic waves are located in a reception channel.

